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Diversity of rust fungi in plant communities of Oblík hill

Abstract

This diploma is based on previous Bc. thesis. It consists of two parts. The first part is devoted to the diversity of the rust on the locality Oblík Mt. (České středohoří Mts.). The second part includes the instruction for use of theme of the rust in biological practical lesson.

The special part consists of a brief description of the locality Oblík, the methods of collecting, processing and preservation of rust and a list of hosts with their rusts and their descriptions. On the investigated area there were found 32 species of rusts. Their presence was determined by the influence of several factors: the composition of surrounding vegetation, the local climate, the annual average temperature, the wind direction, the quantity of rainfall, ontogenetic development of the host plant. The occurrence of some rust species should be expected here in following year, especially the species overwintering as perennial mycelium. The occurrence of most species of rusts is difficult to predict in the future, because they spread diffusely. The special attention was paid to rust on spring plants: *Uromyces muscari* on *Muscari tenuiflorum* and *Puccinia liliacearum* on *Ornithogalum kochii*. These species were chosen because of their regular occurrence in the area. The disease intensity was studied on the locality. The rust *Melampsora linii* on *Linum austriacum* probably represents the first finding on this host in the Czech Republic.

The didactic part was devoted to laboratory work with the topic of microscopic fungi. Materials for practical use in obligatory practical lessons at elementary school have been developed. This part contains materials for students, materials for teachers, teaching methods and worksheets. The lessons were tested at elementary school Mendíků Prague 4. The theme of the rust could be used in project teaching as well.

Keywords:

protected landscape area České středohoří Mts, Oblík hill, diversity of rust fungi (Uredinales)